

Table 2-H-14
Sacramento to Bakersfield – High-Speed Train Alignment Evaluation Matrix
Fresno to Tulare Alignment

Alignment = Alignment Carried Forward

Alignment = Alignment Eliminated

= Primary or Secondary Reason for Elimination

Evaluation Criteria	UPRR (Downtown Fresno to Visalia Airport)	BNSF (Downtown Fresno to Hanford)	E99 (Fresno East to Tulare East County)	W99 (Downtown Fresno to Tulare West County)
<i>Maximize Ridership/Revenue Potential.</i>				
Travel Time	VHS 13.2 minutes	VHS 11.3 minutes	VHS 13.9 minutes	VHS 13.0 minutes
	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Length	35.98 miles 57.90 km	28.85 miles 46.43 km	38.56 miles 62.06 km	34.99 miles 56.32 km
	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Population/Employment Catchment	Not Applicable	Not Applicable	Not Applicable	Not Applicable
<i>Maximize Connectivity and Accessibility.</i>				
Intermodal Connections	*See Visalia Airport Station option	*See Hanford Station option	*See Tulare East County Station option	*See Tulare West County Station
	4	3	2	2
<i>Minimize Operating and Capital Costs.</i>				
Length	UP coordination	BNSF and Amtrak coordination	New right-of-way	UP coordination
	3	3	4	3
Operational Issues	UP coordination	BNSF and Amtrak coordination	New coordination	UP coordination
	3	3	4	3

Evaluation Criteria	UPRR (Downtown Fresno to Visalia Airport)	BNSF (Downtown Fresno to Hanford)	E99 (Fresno East to Tulare East County)	W99 (Downtown Fresno to Tulare West County)
Construction Issues	Fresno downtown UP coordination	Fresno downtown BNSF and Amtrak coordination	New right-of-way	Fresno downtown UP coordination
	3	3	4	3
Capital Cost	High cost because of Fresno downtown and UP	Moderate to high cost because of Fresno Downtown but BN less costly	Moderate to high cost E99 right-of-way	Low cost
	1	3	3	5
Right-of-Way Issues/Cost	Fresno downtown UP ROW High cost per mile	Fresno downtown BNSF and Amtrak ROW	Fresno downtown UP ROW High cost per mile	Fresno downtown UP ROW Low cost per mile
	2	4	2	4
<i>Maximize Compatibility with Existing and Planned Development.</i>				
Land Use Compatibility and Conflicts				
Percent of Conflicting Existing Land Uses within adjacent buffers (Residences, Institutions, Recreation, Parks, and Open Space)	6.07	12.63	6.92	0.82
	4	3	4	5
Visual Quality Impacts				
Scenic Corridor and River Crossings	1.00	0.00	0.00	0.00
	4	5	5	5
<i>Minimize Impacts on Natural Resources.</i>				
Water Resources Impacts				
Number of Natural Stream/Lake Crossings (linear ft)	10.00 (500)	6.00 (300)	13.00 (650)	4.00 (200)
Number of Wetland Crossings	7.00	3.00	16.00	8.00
Total Acreage of Wetlands Within ROW	17.50	1.52	9.71	19.73
	1	4	1	1

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Floodplain Impacts				
Number of FEMA Floodplain Crossings	8.00	5.00	14.00	9.00
Associated Length (meters) of Floodplain Crossings	12348.78	1644.41	11201.35	4347.91
Total Acreage of FEMA Floodplain Crossings	87.51	7.50	84.02	28.05
	1	5	2	4
Threatened & Endangered Species Impacts				
Count of Species w/in ROW	4.00	3.00	5.00	3.00
Count of Species along ROW	0.00	0.00	0.00	0.00
Sensitive Habitat Acreage w/in ROW	12.89	0.00	49.37	11.70
Net Sensitive Habitat Acreage along ROW	38.74	0.00	148.10	35.10
	4	5	1	4
<i>Minimize Impacts on Social and Economic Resources.</i>				
Environmental Justice Impacts (Demographics)				
Minority Within 1,400' Buffer – 1990 Population	21555.00	8786.00	11722.00	9473.00
Low Income Within 1,400' Buffer – 1990 Households	158.00	158.00	0.00	158.00
	2	5	4	5
Farmland Impacts		*Medium severance impacts with alignment mostly along BNSF	*High severance impacts with "new" corridor	*High severance impacts with "new" corridor
Total Acreage of Important Farmlands Within ROW (Prime, Unique, and Statewide Importance)	47.38	255.17	293.44	244.10
	5	2	1	2

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<i>Minimize Impacts on Cultural Resources.</i>				
Cultural Resources Impacts				
Number of National Register Resources Within ROW	0.00	0.00	0.00	0.00
Number of National Register Resources along ROW	0.00	0.00	0.00	0.00
	5	5	5	5
Parks & Recreation/Wildlife Refuge Impacts				
Total Acreage Parks/Recreation Areas in ROW	0.00	0.60	0.43	0.00
Total Acreage of Parks/Recreation Areas along ROW	2.32	2.75	1.64	0.00
Incidences of Parks/Recreation Areas in ROW	0.00	1.00	1.00	0.00
Incidences of Parks/Recreation Areas along ROW	1.00	0.00	0.00	0.00
	3	3	4	5
<i>Maximize Avoidance of Areas with Geologic and Soils Constraints.</i>				
Soils/Slope Constraints				
Not a Distinguishing Factor				
Seismic Constraints				
Not a Distinguishing Factor				
<i>Maximize Avoidance of Areas with Potential Hazardous Materials.</i>				
Hazardous Materials/Waste Constraints				
Not a Distinguishing Factor				

1 2 3 4 5
Least Favorable Most Favorable